IN THE CLAIMS

Claims 1-24 (canceled).

Please add the following new claims.

25. (New) A longitudinally flexible stent for expanding and implanting in a body lumen, comprising:

a plurality of undulating members expandable in the radial direction and interconnected to be generally aligned on a common longitudinal axis, each undulating member associated with shaped members selected from the group consisting of U-shaped members, Y-shaped members, and W-shaped members, at least one shaped member having a radius of curvature being different from a radius of curvature of at least one other shaped member;

a plurality of connecting elements interconnecting the undulating members, the connecting elements configured to interconnect at least two undulating members; and wherein the undulating members and the connecting elements are configured to form at least one of the Y-shaped members and W-shaped members.

- 26. (New) The stent of claim 25, wherein each undulating member is formed of a structural member which, in cross-section, has an aspect ratio of less than two to one.
- 27. (New) The stent of claim 26, wherein the structural member is formed of a biocompatible material selected from the group consisting of stainless steel, titanium, tungsten, tantalum, superelastic NiTi alloys and thermoplastic polymers.

- 28. (New) The stent of claim 25, wherein at least a portion of the stent is coated with a biocompatible coating.
- 29. (New) The stent of claim 25, wherein the undulating members include U-shaped members in an in-phase configuration.
- 30. (New) The stent of claim 25, wherein the undulating members include U-shaped members in an out-of-phase configuration.
- 31. (New) The stent of claim 25, wherein adjacent undulating members are connected by at least two connecting elements.
- 32. (New) The stent of claim 25, wherein adjacent undulating members are connected by at least three connecting elements.
- 33. (New) The stent of claim 25, wherein adjacent undulating members are connected by at least four connecting elements.
- 34. (New) The stent of claim 25, wherein every pair of adjacent undulating members is interconnected by the connecting elements.

35. (New) A longitudinally flexible stent for expanding and implanting in a body lumen, comprising:

a plurality of undulating members expandable in the radial direction and interconnected to be generally aligned on a common longitudinal axis, each undulating member in the form of a generally serpentine pattern having a first curve and second curve, the first curve having a radius of curvature different from a radius of curvature of the second curve; and

a plurality of connecting elements interconnecting the undulating members, the connecting elements configured to interconnect at least two undulating members.

- 36. (New) The stent of claim 35, wherein each undulating member is formed of a structural member which, in cross-section, has an aspect ratio of less than two to one.
- 37. (New) The stent of claim 36, wherein the structural member is formed of a biocompatible material selected from the group consisting of stainless steel, titanium, tungsten, tantalum, superelastic NiTi alloys and thermoplastic polymers.
- 38. (New) The stent of claim 35, wherein at least a portion of the stent is coated with a biocompatible coating.
- 39. (New) The stent of claim 35, wherein the undulating members include U-shaped members in an in-phase configuration.

- 40. (New) The stent of claim 35, wherein the undulating members include U-shaped members in an out-of-phase configuration.
- 41. (New) The stent of claim 35, wherein adjacent undulating members are connected by at least two connecting elements.
- 42. (New) The stent of claim 35, wherein adjacent undulating members are connected by at least three connecting elements.
- 43. (New) The stent of claim 35, wherein adjacent undulating members are connected by at least four connecting elements.
- 44. (New) The stent of claim 35, wherein every pair of adjacent undulating members is interconnected by the connecting elements.
- 45. (New) A longitudinally flexible stent for expanding and implanting in a body lumen, comprising:
- a plurality of undulating members expandable in the radial direction and interconnected to be generally aligned on a common longitudinal axis, each undulating member associated with U-shaped members and Y-shaped members, the U-shaped members having a radius of curvature different from a radius of curvature of the Y-shaped member; and

a plurality of connecting elements interconnecting the undulating members, the connecting elements configured to interconnect at least two adjacent undulating members.

- 46. (New) The stent of claim 45, wherein each undulating member is formed of a structural member which, in cross-section, has an aspect ratio of less than two to one.
- 47. (New) The stent of claim 45, wherein each undulating member is formed of a structural member which, in cross-section, has an aspect ratio of less than two to one.
- 48. (New) The stent of claim 47, wherein the structural member is formed of a biocompatible material selected from the group consisting of stainless steel, titanium, tungsten, tantalum, superelastic NiTi alloys and thermoplastic polymers.
- 49. (New) The stent of claim 45, wherein at least a portion of the stent is coated with a biocompatible coating.
- 50. (New) The stent of claim 45, wherein the undulating members include U-shaped members in an in-phase configuration.
- 51. (New) The stent of claim 45, wherein the undulating members include U-shaped members in an out-of-phase configuration.

- 52. (New) The stent of claim 45, wherein adjacent undulating members are connected by at least two connecting elements.
- 53. (New) The stent of claim 45, wherein adjacent undulating members are connected by at least three connecting elements.
- 54. (New) The stent of claim 45, wherein adjacent undulating members are connected by at least four connecting elements.
- 55. (New) The stent of claim 45, wherein every pair of adjacent undulating members is interconnected by the connecting elements.